

CLAIMS

What is claimed is:

- 1 1. A method of automatically identifying and resolving one or more discrepancies in an
2 outsourced manufacturing supply chain in which an enterprise and a plurality of its
3 supply chain partners participate, the method comprising the computer-implemented
4 steps of:
5 receiving first supply chain event information representing one or more first supply
6 chain events from each of the supply chain partners at a database with which
7 each of the supply chain partners may communicate over a network;
8 periodically applying one or more rules to the first supply chain event information;
9 generating one or more alerts pertaining to one or more discrepancies that are found in
10 the supply chain event information, based on applying the rules;
11 communicating one of the alerts to only those supply chain partners who are
12 participating in a transaction to which the discrepancies relate;
13 receiving second information that represents a second supply chain event that resolves
14 the alert;
15 resolving the alert in the database based on the second information.
- 1 2. A method as recited in Claim 1, further comprising the step of periodically escalating
2 the alert to one or more pre-defined parties associated with each of the supply chain
3 partners who are participating in the transaction to which the discrepancies relate,
4 until the second information is received.
- 1 3. The method as recited in Claim 2, wherein the step of periodically escalating the alert
2 comprises the steps of:
3 determining a set of one or more new unsent alerts;
4 consolidating the set of new unsent alerts by rule and by recipient;
5 sending the consolidated alerts to each recipient in a message that is organized by
6 rule.

- 1 4. A method as recited in Claim 1, wherein the step of receiving first supply chain event
2 information further comprises the steps of:
3 receiving the first supply chain event information in the form of one or more
4 electronic documents that are formatted as Partner Integration Process
5 documents in a staging database;
6 validating the electronic documents according to Partner Integration Process
7 standards;
8 importing only those electronic documents that are validated successfully into an
9 alerts database that is logically separate from the staging database.
- 1 5. A method as recited in Claim 1, wherein the steps of generating and resolving further
2 comprise the steps of:
3 periodically evaluating one or more existing alerts that are stored in an alerts table of
4 the database;
5 determining whether a particular existing alert is marked as resolved; and
6 removing the particular existing alert from the alerts table.
- 1 6. The method as recited in Claim 5, wherein periodically applying rules comprises the
2 steps of applying an Expected Delivery Disconnect rule to identify one or more
3 differences between a Buy-Side Partner's PO delivery date and quantity and a Sell-
4 Side Partner's Sales Order delivery date and quantity.
- 1 7. The method as recited in Claim 5, wherein periodically applying rules comprises the
2 steps of applying an Unplaced Purchase Order rule to identify planned purchase
3 orders for which an actual purchase order has not yet been placed.
- 1 8. The method as recited in Claim 5, wherein periodically applying rules comprises the
2 steps of applying a Late Purchase Order Receipt rule to identify purchase orders that
3 have late receipts to a Buy-Side Partner.

- 1 9. The method as recited in Claim 5, wherein periodically applying rules comprises the
2 steps of applying a Late Sales Order Shipment rule to identify sales orders having late
3 ship dates to the Buy-Side Partner.
- 1 10. The method as recited in Claim 5, wherein periodically applying rules comprises the
2 steps of applying a Late Trigger Start rule to identify Work Orders having late starts
3 to the enterprise, based on late trigger starts.
- 1 11. The method as recited in Claim 5, wherein periodically applying rules comprises the
2 steps of applying a Supply/Demand Disconnect rule to identify when a Partner's
3 Gross Component Demand exceeds its Supply over the course of the planning period.
- 1 12. The method as recited in Claim 5, wherein periodically applying rules comprises the
2 steps of:
3 receiving a set of updated manufacturing resource planning (MRP) data from a first
4 supply chain partner;
5 applying a MRP Profile rule that results in generating a user interface display that
6 summarizes how the supply chain is affected by one or more changes reflected
7 in the MRP data.
- 1 13. The method as recited in Claim 5, wherein periodically applying rules comprises the
2 steps of applying a Baseline Forecast Disconnect rule to identify a difference between
3 a baseline forecast of a Buy-Side Partner and a forecast of said partner for a current
4 week.

1 14. The method as recited in Claim 5, wherein periodically applying rules comprises the
2 steps of applying a Forecast Time Fence Disconnect rule to identify a difference
3 between a Current Forecast of the enterprise and a previous week forecast in
4 comparison to a Time Fence Agreement that the enterprise has entered into with the
5 partner.

1 15. The method as recited in Claim 5, wherein periodically applying rules comprises the
2 steps of applying a Lead Time Disconnect rule to identify one or more differences in
3 Lead Times between a Buy-Side Partner and a Sell-Side Partner.

1 16. The method as recited in Claim 5, wherein periodically applying rules comprises the
2 steps of applying a Sales Order Change rule to identify one or more purchase orders
3 that have changed and that will affect current Sales Orders.

1 17. The method as recited in Claim 5, wherein periodically applying rules comprises the
2 steps of applying a Top Level Demand Disconnect rule to identify one or more
3 differences between a forecast of the enterprise and a master production schedule load
4 of a contract manufacturer that is one of the supply chain partners.

1 18. The method as recited in Claim 5, wherein periodically applying rules comprises the
2 steps of applying a Lead Time/Delivery Date Disconnect rule to identify one or more
3 purchase orders that have been placed with Lead Times different than quoted Lead
4 Times.

- 1 19. A computer-readable medium carrying one or more sequences of instructions for
2 automatically identifying and resolving one or more discrepancies in an outsourced
3 manufacturing supply chain in which an enterprise and a plurality of its supply chain
4 partners participate, which instructions, when executed by one or more processors,
5 cause the one or more processors to carry out the steps of:
6 receiving first supply chain event information representing one or more first supply
7 chain events from each of the supply chain partners at a database with which
8 each of the supply chain partners may communicate over a network;
9 periodically applying one or more rules to the first supply chain event information;
10 generating one or more alerts pertaining to one or more discrepancies that are found in
11 the supply chain event information, based on applying the rules;
12 communicating one of the alerts to only those supply chain partners who are
13 participating in a transaction to which the discrepancies relate;
14 receiving second information that represents a second supply chain event that resolves
15 the alert;
16 resolving the alert in the database based on the second information.
- 1 20. An apparatus for automatically identifying and resolving one or more discrepancies in
2 an outsourced manufacturing supply chain in which an enterprise and a plurality of its
3 supply chain partners participate, comprising:
4 means for receiving first supply chain event information representing one or more
5 first supply chain events from each of the supply chain partners at a database
6 with which each of the supply chain partners may communicate over a
7 network;
8 means for periodically applying one or more rules to the first supply chain event
9 information;
10 means for generating one or more alerts pertaining to one or more discrepancies that
11 are found in the supply chain event information, based on applying the rules;
12 means for communicating one of the alerts to only those supply chain partners who
13 are participating in a transaction to which the discrepancies relate;

14 means for receiving second information that represents a second supply chain event
 15 that resolves the alert;
 16 means for resolving the alert in the database based on the second information.

1 21. An apparatus for automatically identifying and resolving one or more discrepancies in
 2 an outsourced manufacturing supply chain in which an enterprise and a plurality of its
 3 supply chain partners participate, comprising:
 4 a network interface that is coupled to the data network for receiving one or more
 5 packet flows therefrom;
 6 a processor;
 7 one or more stored sequences of instructions which, when executed by the processor,
 8 cause the processor to carry out the steps of:
 9 receiving first supply chain event information representing one or more first
 10 supply chain events from each of the supply chain partners at a
 11 database with which each of the supply chain partners may
 12 communicate over a network;
 13 periodically applying one or more rules to the first supply chain event
 14 information;
 15 generating one or more alerts pertaining to one or more discrepancies that are
 16 found in the supply chain event information, based on applying the
 17 rules;
 18 communicating one of the alerts to only those supply chain partners who are
 19 participating in a transaction to which the discrepancies relate;
 20 receiving second information that represents a second supply chain event that
 21 resolves the alert;
 22 resolving the alert in the database based on the second information.

1 25. An apparatus as recited in Claim 24, further comprising an administrative subsystem
2 configured to enable an administrative user to create and store one or more values that
3 define the pre-defined parties and one or more other characteristics of the supply
4 chain partners.

1 26. An apparatus as recited in Claim 22, further comprising user interface generating
2 logic that is configured to generate one or more user interface pages for delivery to a
3 logically separate display station, wherein one of the user interface pages comprises a
4 summary view of one of the alerts, and includes one or more links to detailed views of
5 information related to the one of the alerts that is shown in the summary view.

1 27. An apparatus as recited in Claim 22, further comprising user interface generating
2 logic that is configured to generate one or more user interface pages for delivery to a
3 logically separate display station, wherein one of the user interface pages comprises a
4 summary view of one of the alerts, and includes one or more links to detailed views of
5 information related to the one of the alerts that is shown in the summary view,
6 wherein the links are selected from among a plurality of links relating to all alerts and
7 include only links that specifically pertain to the one of the alerts that is shown in the
8 summary view.